

***Amendments to the Drawings***

In the drawings, Fig. 1 is sought to be amended to provide identifying indicia for element 101 according to 37 CFR 1.84(c) and to provide the label “time” for the horizontal axis illustrated in FIG. 1. This drawing change is believed to introduce no new matter, and its entry is respectfully requested. Support for the amendment to FIG. 1 can be found, for example, at paragraph [0003] of the published application. A replacement drawing sheet showing FIG. 1 is submitted herewith.

In the drawings, FIG. 2 is further sought to be amended to correct errors in the textual labels of elements 201 and 202. Specifically, the word “control” is sought to be removed and replaced with the word “constrained,” which corresponds with the discussion at paragraph [0028] of the published application. This drawing change is believed to introduce no new matter, and its entry is respectfully requested. A replacement drawing sheet showing FIG. 2 is submitted herewith.

Identification of the replacement drawing sheets submitted herewith is provided in accordance with 37 C.F.R. §§ 1.84(c) and 1.121(d). Acknowledgement of the receipt, approval, and entry of the replacement drawing sheets showing FIGs. 1 and 2 into this application is respectfully requested.

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-7 and 10-16 are pending in the application, with claims 1, 4 and 7 being the independent claims. Claim 14 is sought to be amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Objection to the Claims***

The Examiner has objected to claim 14 because of alleged informalities. Applicants have amended claim 14 to accommodate the Examiner's objection. Accordingly, Applicants respectfully request that the objection to claim 14 be reconsidered and withdrawn.

***Rejections under 35 U.S.C. § 103***

**Claims 1, 4 and 7**

The Examiner has rejected claims 1, 4, and 7 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,658,024 to Okamura ("Okamura") in view of U.S. Patent No. 5,566,175 to Davis ("Davis"). For the reasons set forth below, Applicants respectfully traverse.

The combination does not teach or suggest each and every feature of independent claim 1. The Examiner acknowledges that Okamura does not explicitly teach “the first bit rate and the second bit rate being constrained such that a transmission latency does not exceed a predetermined maximum allowed transmission latency,” as recited by claim 1. *See* Office Action, page 3. However, the Examiner contends that Davis provides this missing feature. Specifically, the Examiner states:

Davis teaches of a transmission system where bandwidth is allocated for a connection, where the maximum burst of low data rate transmission is not to reach a value that will exceed the maximum allowable delay (see column 4, lines 1-4). Thus it would have been obvious to a person of ordinary skill in the art at the time of the invention that the data transfer rate of a connection and the delay/latency of that connection are inversely proportional, where a low data rate will increase latency, and a high data rate will decrease latency, as is well-known in the art.

*See* Office Action, page 3. Applicants respectfully disagree.

Davis is directed to a Fast Bandwidth Reservation Shaper (FBRS) that “comprises a FIFO buffer with three thresholds (T1-T3), a server, and a Fast Reservation Protocol (FRP) control function which monitors the state of the queue and its associated thresholds, alters the service rate of the server, and handles the FRP protocol.” *See* Davis at Abstract. Davis purports that the FBRS efficiently maximizes bandwidth while minimizing data loss and delay. *Id.* In basic operation, the FIFO buffers data received from a source terminal that is destined for transmission over a broadband network via a server. The source terminal provides data to the FIFO, and ultimately to the broadband network via the server, in a bursty nature. Consequently, the FIFO buffer is often empty, or nearly empty, until a burst of data is received from the source terminal.

Davis purports efficient bandwidth reservation of the broadband network, in view of the bursty nature of the source terminal, by monitoring the amount of data buffered by

the FIFO. Specifically, Davis employs the use of **buffer thresholds**, T1-T3, to monitor the amount of data being currently buffered by the FIFO to determine current bandwidth needs. As disclosed in the abstract of Davis (and illustrated in FIG. 2):

When the first buffer threshold is reached the FRP controller attempts to negotiate a small data rate (R1) with the network. As the queue grows to the second threshold (T2), the FRP controller attempts to negotiate a higher data rate (R2), slightly larger than the peak data rate for traffic. If the buffer completely empties, threshold (T3) will be reached and the FRP will clear down the allocated bandwidth to zero or small bandwidth.

See Davis at Abstract and FIG. 2. Davis does not, **in any regard**, teach or suggest constraining data rates R1 and R2 **to guarantee a maximum delay**. Davis merely designs the buffer size (L) and thresholds T1 and T2 “to meet server parameters by guaranteeing a maximum delay and a maximum data loss probability.” *Id.* In fact, Davis refers to rates R1-R3 as “fixed bit rates.” See Davis, col. 4, ll. 37-41.

Applicants respectfully point out that Davis, by changing the FIFO thresholds, varies the **duration** in which data is sent at one rate, such as rate R1, and at another rate, such as rate R2, thereby guaranteeing a maximum delay. With respect to Applicants claim 1, this would, in a very limited sense, amount to varying the duration of the first and second noise phases. However, the teachings of Davis are in clear contrast to the feature of claim 1 noted above, which recites “**the first bit rate and the second bit rate being constrained** such that a transmission latency does not exceed a predetermined maximum allowed transmission latency” (emphasis added).

For at least the reasons noted above, the combination of Okamura and Davis cannot render claim 1 unpatentable. Accordingly, Applicants respectfully request that the rejection of claim 1 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Independent claims 4 and 7 each recite the feature “determining a first bit rate for symbols transmitted during the first noise phase, and a second bit rate for symbols transmitted during the second noise phase, the first bit rate and the second bit rate being constrained such that a transmission latency does not exceed a predetermined maximum allowed transmission latency.” As noted above in regard to claim 1, the combination of Okamura and Davis does not teach or suggest this feature. Therefore, claims 4 and 7 are patentable over the combination of Okamura and Davis. Accordingly, Applicants respectfully request that the rejection of claims 4 and 7 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

**Claims 2, 5 and 10**

The Examiner has rejected claims 2, 5 and 10 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Okamura in view of Davis, and in further view of U.S. Patent No. 6,801,570 to Yong (“Yong”). For the reasons set forth below, Applicants respectfully traverse.

Yong does not in anyway remedy the deficiencies of Okamura and Davis with respect to independent claims 1, 4 and 7 as discussed above. Consequently, the combination of Okamura, Davis and Yong cannot render independent claims 1, 4 and 7 obvious. Claim 2 is not rendered obvious by the combination of Okamura, Davis and Yong for the same reason as independent claim 1, from which it depends, and further in view of its own respective feature. Claim 5 is not rendered obvious by the combination of Okamura, Davis and Yong for the same reason as independent claim 4, from which it depends, and further in view of its own respective feature. Claim 10 is not rendered obvious by the combination of Okamura, Davis and Yong for the same reason as

independent claim 7, from which it depends, and further in view of its own respective feature. Accordingly, Applicants respectfully request that the rejection of claims 2, 5 and 10 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

**Claims 3, 6 and 11-12**

The Examiner has rejected claims 3, 6 and 11-12 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Okamura in view of Davis in view of Yong, and in further view of U.S. Patent No. 6,009,122 to Chow (“Chow”). For the reasons set forth below, Applicants respectfully traverse.

Chow does not in anyway remedy the deficiencies of Okamura, Davis and Yong with respect to independent claims 1, 4 and 7 as discussed above. Consequently, the combination of Okamura, Davis, Yong and Chow cannot render independent claims 1, 4 and 7 obvious. Claim 3 is not rendered obvious by the combination of Okamura, Davis, Yong and Chow for the same reason as independent claim 1, from which it depends, and further in view of its own respective feature. Claim 6 is not rendered obvious by the combination of Okamura, Davis, Yong and Chow for the same reason as independent claim 4, from which it depends, and further in view of its own respective feature. Claims 11-12 are not rendered obvious by the combination of Okamura, Davis, Yong and Chow for the same reason as independent claim 7, from which they depend, and further in view of their own respective feature. Accordingly, Applicants respectfully request that the rejection of claims 3, 6 and 11-12 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

**Claims 13**

The Examiner has rejected claims 13 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Okamura in view of Davis, Yong, Chow, and in further view of U.S. Patent No. 6,580,752 to Amrany *et al.* (“Amrany”). For the reasons set forth below, Applicants respectfully traverse.

Amrany does not in anyway remedy the deficiencies of Okamura, Davis, Yong and Chow with respect to independent claim 7 as discussed above. Consequently, the combination of Okamura, Davis, Yong, Chow and Amrany cannot render independent claim 7 obvious. Claim 13 is not rendered obvious by the combination of Okamura, Davis, Yong, Chow and Amrany for the same reason as independent claim 7, from which it depends, and further in view of its own respective feature. Accordingly, Applicants respectfully request that the rejection of claim 13 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

***Allowable Subject Matter***

The Office Action has objected to claims 14-16 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all limitations of the base claim and any intervening claims. Based on the above Remarks, Applicants respectfully submit that claims 14-16 are patentable over the art of record without being rewritten in independent form including all limitations of the base claim and any intervening claims. Therefore, it is respectfully requested that the objection to claims 14-16 be reconsidered and withdrawn.

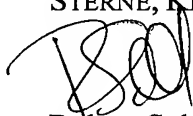
***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Robert Sokohl  
Attorney for Applicants  
Registration No. 36,013

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1100 New York Avenue, N.W.  
Washington, D.C. 20005-3934  
(202) 371-2600  
788593\_1.DOC